CLAIMS

WHAT IS CLAIMED IS:

1. A coated stent comprising a stent and a coating composition comprising a biologically active component and a biodegradable carrier component, the biodegradable carrier having a melting point of about 50°C or less.
2. The coated stent of claim 1, further comprising a catheter, wherein the catheter and the coated stent can be coupled to form a treatment assembly.
3. The coated stent of claim 1, wherein the biodegradable carrier has a melting point of from about 35 °C to about 45 °C.
4. The coated stent of claim 1 wherein the biologicaly active component has a melting point of about 50 °C or less.
5. A coated stent comprising a stent and a coating composition that includes a biologically active component and a biodegradable carrier, wherein the biodegradable carrier has a viscosity of from about 0.1 to about 15000 cP.
6. A coated stent comprising a stent and a coating composition that includes a biologically active component and a biodegradable carrier, wherein the coating composition is in a solid state outside of a human body and melts to form a liquid inside of a human body.
7. The coated stent of claim 1 in which the coating composition is hydrophobic.
8. The coated stent of claim 1 in which the biodegradable carrier is hydrophobic.
9. The coated stent of claim 1 in which the biodegradable carrier is biocompatible.
10. The coated stent of claim 1 in which the biodegradable carrier comprises a polymer.
11. The coated stent of claim 1 in which the biodegradable carrier comprises a polymer having a molecular weight of 50,000 or less.
12. The coated stent of claim 1 in which the biodegradable carrier comprises a non-polymer.
13. The coated stent of claim 1 in which the biodegradable component comprises vitamin E or a derivative thereof.
14. The coated stent of claim 1 wherein the biodegradable carrier comprises vitamin E acetate.

15. The coated stent of claim 1 wherein the biodegradable carrier comprises vitamin E succinate.

16. The coated stent of claim 1 wherein the biodegradable carrier is selected from the group consisting of oleic acid, peanut oil, and cottonseed oil.

17. The coated stent of claim 1 wherein the biodegradable carrier is a selected from the group consisting of polyhydroxy acids, polyanhydrides, polyphosphazenes, biodegradable polyamides, polyalkylene oxalates, polyorthoesters, polyphosphoesters, polyorthocarbonates, and blends or copolymers thereof.

18. The coated stent of claim 1 in which the biologically active component is capable of inhibiting restenosis.

19. The coated stent of claim 1 in which the biologically active component is selected from the group consisting of paclitaxel, actinomycin D, rapamycin, cerivastatin, fluvastatin, simvastatin, lovastatin, atorvastatin, and pravastatin.

20. The coated stent of claim 1, wherein the stent has struts and capillaries, groves, channels engraved in the struts.

21. The coated stent of claim 1, wherein the stent comprises a strut and the strut comprises a surface area enhancing feature.

22. The coated stent of claim 21 wherein the surface enhancing feature is selected from the group consisting of grooves, capillaries, or channels.

23. The coated stent of claim 22 wherein the surface enhancing feature contains at least some of the coating composition.

24. A method of coating a stent comprising:

providing a stent,

providing a coating composition comprising a biologically active component and a biodegradable carrier having a melting point of about 50 °C or less, and

applying the coating composition to the stent.

25. The method of claim 24, further comprising the step of expanding the stent to an increased diameter before applying the coating composition to the stent.

26. The method of claim 24 wherein applying the coating composition comprises spraying or painting the coating composition onto the stent, or immersing the stent in the coating composition.

27. A method of coating a stent comprising:

providing a stent,

providing a coating composition comprising a biologically active component and a biodegradable carrier having a viscosity of from about 0.1 to about 15000 cP, and

applying the coating composition to the stent.

28. A method of treating restenosis comprising:

deploying a coated stent into a body lumen of a patient, the coated stent comprising a stent and a coating composition comprising a biodegradable carrier having a melting point of about 50°C or less and a biologically active component.

29. A method of treating restenosis comprising:

deploying a coated stent into a body lumen of a patient, the coated stent comprising a stent and a coating composition comprising a biodegradable carrier having a viscosity of from about 0.1 to about 15,000 cP and a biologically active component.

30. A tmethod of treating restenosis comprising:

providing a coated stent comprising a stent, a biologically active component and a biodegradable solid carrier, and

deploying the coated stent into a body lumen of a patient, the coating composition changing from a solid to a liquid inside the patient.

31. A method of treating restenosis comprising:

coupling a stent to a catheter,

spraying the catheter and the stent with a coating composition comprising a biologically active component and a biodegradable carrier having a melting point of about 50°C or less, and

deploying the coated stent into a body lumen of a patient.